addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Remarks

Reconsideration of this Application is respectfully requested. Claims 1-11 are pending in the application, with claims 1 and 9 being the independent claims. Based on the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections Under 35 U.S.C. § 103

Claims 1-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,532,017 to Knittel *et al.* (hereinafter "Knittel") in view of U.S. Patent No. 6,597,363 to Duluk, Jr. *et al.* (hereinafter "Duluk"). (*See*, Office Action at ¶ 5.) Applicant respectfully traverses these rejections.

At Paragraph 6 the Office Action concedes:

that Knittel does not explicitly disclose 'wherein said allocated computer graphics data that correspond to the portion to the portion of the scene includes at least one of first data for a first graphics primitive having first vertices that lie within the rectangular volume to which that GPU has been assigned and second data for a second graphics primitive having a vertex that lies outside of the rectangular subvolume to which that GPU has been assigned'.

However, the Office Action contends that "this is known in the art as taught by Duluk[.] . . . Duluk discloses a graphics processing method in which vertices outside of a volume as well as vertices inside a volume are included within a rectangular volume for processing[.]" (Office Action at ¶ 6.)

Duluk teaches a graphics pipeline having a *single* graphics processor: "[T]his graphics processor is hereafter referred to as the DSGP (for Deferred Shading Graphics Processor), or the DSGP pipeline, but is sometimes referred to as the pipeline." (Duluk at col. 12, line 67 through col. 13, line 3.) Although the graphics processor of Duluk can:

> take geometry scattered around the display window and sort it into tiles[,] . . . . [w]hen a page in sort memory is being written, vertices and modes are written *sequentially* into the sort memory as they are received by the sort block. When a page is read from sort memory, the read is done on a *tile-by-tile basis*[.]

(Duluk at col. 26, lines 5-17 (emphasis added).) In contrast, "[t]he present invention provides a method and system for presenting three-dimensional computer graphics images using *multiple graphics processing units*." (Specification at ¶ 24 (emphasis added.) Duluk does not disclose, teach, or suggest a method or system that uses multiple graphics processing units.

Furthermore, *Knittel does not disclose, teach, or suggest a method or system that uses graphics primitives as used in the claimed invention*. The basic building blocks used in Knittel "are called volume elements, or 'voxels[.]' . . . [V]oxel values for a particular object or system may represent density, type of material, temperature, velocity, or some other property at *discrete points* in space[.]" (Knittel at col. 1, lines 20-25 (emphasis added).) In contrast, the basic building blocks used in the present invention are graphics primitives. "Each graphics primitive includes a *set of vertices*." (Specification at ¶ 31 (emphasis added.) In other words, *a graphics primitive encompasses more than a discrete point*.

One of skill in the art would have no reason to turn to Duluk to modify the teachings of Knittel. The present invention is directed towards an accurate representation of an image. Shapes of objects in the image are important and are represented using graphics primitives. In contrast, Knittel is directed towards displaying data (e.g., density, type of material, temperature, velocity) in a graphic format. Knittel strives to present a general correlation between a datum point and its position in an object or system. "It will be appreciated that sample points 20 do not necessarily intersect the voxel 12 coordinates exactly. Therefore, the value of each sample point are [sic] synthesized from the values of voxels nearby." (Knittel at col. 9, lines 7-10.) Because "objects" in an "image" in Knittel are representations of data, Knittel uses its defined voxels instead of graphics primitives. Because the basic building blocks of Knittel are different from those of Duluk, the skilled artisan would have no reason to combine the teachings of Duluk with those of Knittel.

None of the cited reference teach all of the claimed elements. None of the cited references even makes any suggestion that such a combination of elements would be desirable. In making the rejections, it appears to Applicant that the Examiner is picking and choosing elements from different, unrelated references and is combining these elements to reconstruct the invention. Since there is no teaching or suggestion in any of the applied documents to make such a combination of references, Applicant assumes that the Examiner is using Applicant's own claims as the blueprint or roadmap for making the combination. This use of Applicant's own disclosure to reconstruct the claimed invention is impermissible. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and

not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.

Cir. 1991)." (M.P.E.P. § 2142.)

For at least these reasons, claims 1-11 are patentable over Duluk in view of

Knittel. Accordingly, Applicant requests that the rejections under 35 U.S.C. § 103(a) be

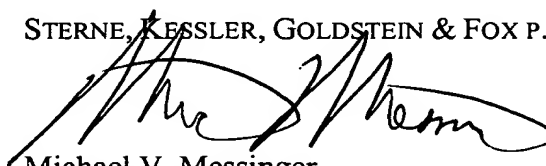reconsidered and withdrawn for claims 1-11 and that these claims be passed to

allowance.

Conclusion

All of the stated grounds of rejection have been properly traversed. Applicant

therefore respectfully requests that the Examiner reconsider all presently outstanding

rejections and that they be withdrawn. Applicant believes that a full and complete reply

has been made to the outstanding Office Action and, as such, the present application is in

condition for allowance. If the Examiner believes, for any reason, that personal

communication will expedite prosecution of this application, the Examiner is invited to

telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully

requested.

Respectfully submitted,

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